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SUPPLEMENT TO REPORT NO. 25X1

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4. The raw materials processed by the plant included ethyl alcohol, naphthalene, toluol, and an unidentified yellow powder. Generally coke was used for heating although a little coal was used. Power was supplied by the Verkhneye (N48-53, E38-28) power plant. In addition, the plant had its own emergency power unit.
5. In the summer of 1948, the plant was headed by Manager Loginov, (fnu), a mechanical engineer who controlled the reconstruction of the installations and the initial production. Bernstein, (fnu), was the chief engineer. The plant had 300 employees, some of whom worked in one shift, others in three.
6. The plant was surrounded by a barbed-wire fence and some watchtowers. Guard duty was done by MVD soldiers. The gate control and occasional checks within the plant were made by armed civilians. The plant fire brigade, stationed outside the plant, was equipped with one fire engine and three other vehicles with fire-extinguishing appliances.

Comment: According to other records the German Explosives Plant in Christianstadt was dismantled in 1945. It was the largest trimethylene-trinitroamine, $C_3H_6O_6N_6$, producing plant and had a monthly capacity of 200,000 tons. Production was effected by nitrating urotropin (hexamethylene-tetramine) according to the SH-salt process (sic) with a final output of 40 percent.

Enclosure: Map of Rubezhnaya area (State 2, Army 5, Navy 3, Air 3, OCD 4).

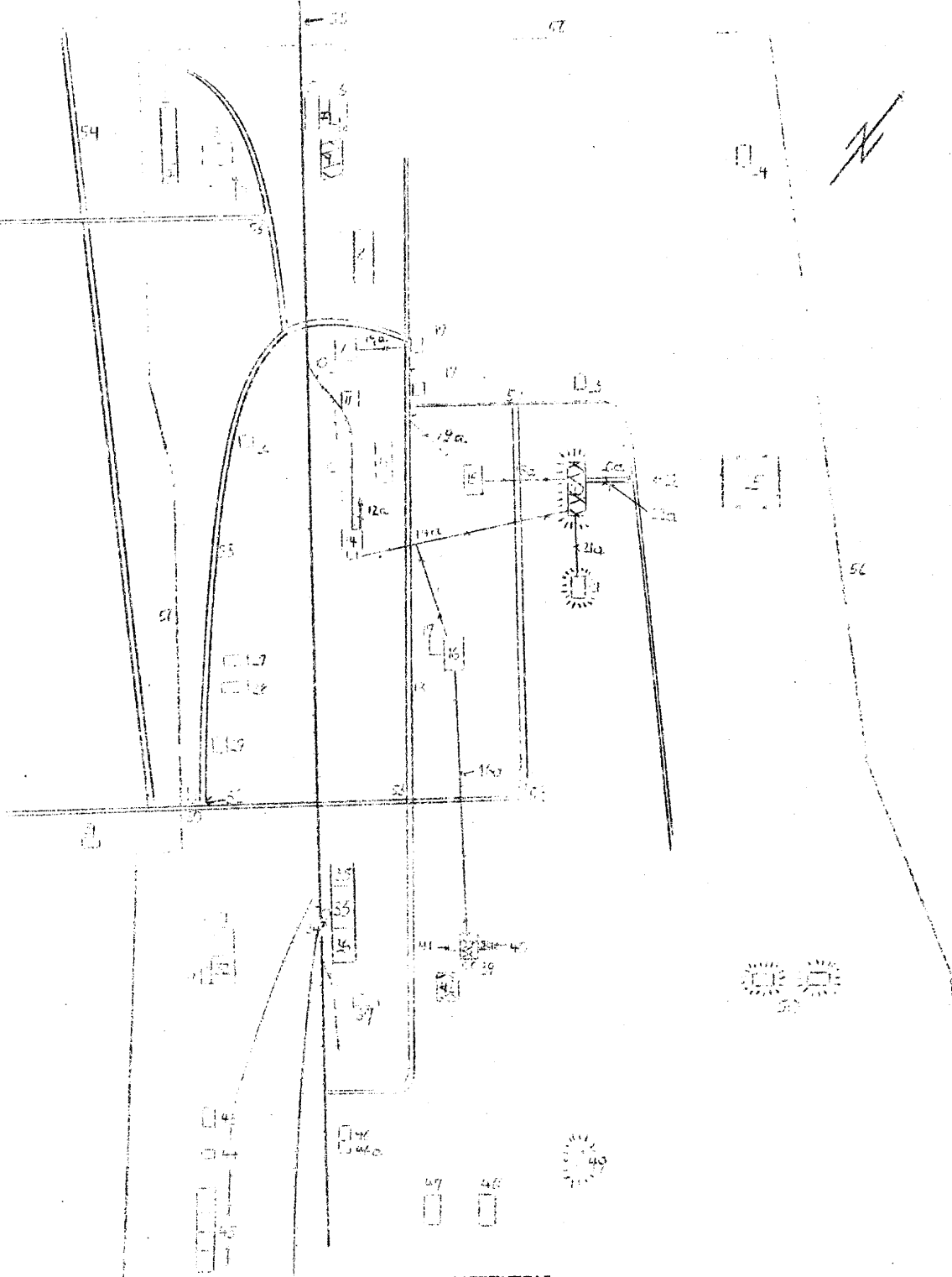
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Layout Sketch of the 20 Zaved Chemical Plant in Rubashnaya

Legends: See next page



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Legend:

1. Plant fire brigade, a three story structure, 30 x 8 meters. On the ground-floor there was a garage for four fire-fighting trucks including one fire engine. Personnel of the fire brigade of about 50 men and women lived on the second floor.
2. Storehouse, a stone structure with felt roofing, 60 x 12 meters, with a ramp for trucks. Stored material included clothing, dyes, and spare parts. A garage was attached to this structure. (a)
3. Depot for alcohol, consisting of a number of old boiler-like small containers and six large containers which came from dismantlings. The large containers were made of V2A steel and had a capacity of about 20 cubic meters each. A pumping installation was close to the containers. Pure ethyl alcohol, which later was denaturated for production, was stored in this depot.
4. Transformer station, 15 x 6 meters. It was divided into several compartments.
5. Old brick building, 31 x 16 x 6.5 meters. The roof was made of concrete girders and concrete slabs. A basin, about 1.8 meters deep, walled with quartz-like square stones, the joints of which were filled with acid-proof cement, was inside this building; a concrete passage led to the building indicated as Item 6.
6. Brick building, about 26 x 18 x 20 meters with roof structure and cover made of concrete. A tower was at the eastern corner of this structure. Two steel containers, each about 18 meters high and 1.2 meters in diameter, were on the east side of the building. The steel containers were connected by a strong pipe line. The concrete inclined connecting passage led from the building, Item 5, up to the tower of the building, Item 6. The two containers could be reached from this tower.
7. Old brick building, 40 x 22 x 25 meters, with very thick walls, partly built as a workshop, partly as a five-story structure. The roof was of reinforced concrete. The installation was not in operation by the summer of 1949.
8. Workshop built of lime sandstone, 80 x 20 x 14 meters. The equipment had been dismantled during the war and had not been returned by the summer of 1949.
9. Old brick building, 26 x 24 meters, approximately 10 meters high. The roofing structure consisted of weak steel girders covered with wood and roofing felt. Inside the building were four tanks, each 6 meters high and 8 meters in diameter, placed on slightly elevated concrete foundations. The tanks had sheet steel jackets. In an annex was a steam-operated plunger pump. In early 1949, these tanks were once filled with toluol.
10. Two outdoor tanks, each 6 meters high and 8 meters in diameter, placed on a concrete foundation. They were connected by a pipe line with the tanks of the workshop, Item 9. In 1948, the tanks were repaired and filled with toluol.
11. Site still covered with debris in August 1949.
12. Eight open-air tanks, each 8 meters high and 8 meters in diameter. They were repaired in 1948. A spur track passed between these tanks to the building indicated as Item 14. A pipe line (a) also led from these tanks to the building. The installation was not in operation in August 1949.

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13. In a concrete basin, built into the ground, were three boiler-like containers with a capacity of about 20 cubic meters each, placed on concrete pedestals. They were covered with sheet metal with a layer of earth piled on top.
14. Old brick building, 20 x 20 x 10 meters. The roof consisted of steel girders covered with wood coated with a thick layer of asphalt. A spur track led into this building. The equipment consisted of six tanks, each 6 meters high and 5 meters in diameter. Five tanks, damaged by blasting, had not been repaired by the summer of 1949. One tank was filled in 1947 and used as storage tank for ethyl alcohol. The output was from 1 to 2 tank cars per month. In a room of a small annex building there were 12 electric centrifugal pumps of 8 hp each. Pipe lines (a) led from here to buildings, Items 16 and 20. All pipe lines leading outside were supported on steel masts, 5 meters high. There was an office room in this building.
15. Old brick building, 25 x 14 x 10 meters. The building was repaired in 1948. The equipment consisted of dismantled German installations including three centrifuges, several open tubs, lined with lead, and a number of steam-heated stirring apparatus some made of iron, some of V2A steel. Several iron steam pipe lines and pipe lines made of V2A steel were observed. Some of the apparatus were set on the shelves of a steel frame placed at the wall of the workshop.
 - a. Pipe line to building indicated as Item 20.
16. Old brick building with concrete roof, 25 x 18 x 10 meters. Six stirring apparatus made of V2A steel were on the ground floor. They were double-walled and equipped with steam-heated stirring coils made of tubes. The tanks of the stirrers were in the basement. They were 3 meters high and 2.6 meters in diameter, and reached into the ground floor. A number of pumps and pipe lines were also installed in the basement. In the hall above the ground floor were several open containers made of V2A steel, 6 x 4 x 1.5 meters each. Ventilation pipes made of V2A steel, coming from the stirring installations on the ground floor, led through this hall and extended as smokestacks above the roof. A thick, yellow, biting smoke escaped from these smokestacks after the installations was put into operation in early 1949. Toluol was also processed in the stirring apparatus.
 - a. Pipe lines leading to the building indicated as Item 38.
17. Annex built of lime sandstone with concrete roof, 8 x 3 x 4 meters. This Annex was used as a repair shop.
18. Several containers made of V2A steel, 6 meters high and 4 meters in diameter, placed on concrete foundations.
19. Several containers, each 8 meters high and 6 meters in diameter, covered with earth to the top. In 1947, they were set up on old foundations. Next to them were pumping installations.
 - a. Pipe lines made of V2A steel, supported by masts, led from these installations to the buildings, Items 15 and 9.
20. Brick building with concrete roof, 50 x 15 x 9 meters. From 1945 to 1947, the destroyed building had been reconstructed to its former size. On three sides, the building was surrounded by an earthen embankment reaching about 2 meters below the roof edge, but open to the northeast.
 - a. Pipe lines leading to the container of Item 22.

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21. Brick building with wooden roofing beams and cover, 16 x 10 x 10 meters. An earth embankment extending to the gable surrounded the entire structure. The destroyed building had been reconstructed from 1945 to 1947. The center of the building consisted of two connected workshops. Both ends of the building were three-story sections divided into small rooms. In the workshops there were five closed square containers made of nickel-chrome steel, 3 x 3 x 0.8 meters each, and three boiler-like containers also made of nickel-chrome steel, with a capacity of about 3 cubic meters each. Some of the containers came from Germany. All containers rested on concrete foundations covered with lead sheets. A large screw press was in one of the rooms next to the hall. All the apparatus were connected by nickel-chrome steel pipes. Such a pipe line (a) led to the building indicated as Item 20. To one side of the containers were electric centrifugal pumps. The respective power lines were encased to prevent explosions. The workshops were illuminated by lamps fitted to the outside walls; the light shone through the windows. The operation was started in early 1949.
22. A container built into the ground with a capacity of about 35 cubic meters, walled with bricks and acid-proof plastering. The container was covered with boards on top. A pipe line, coming from the building indicated as Item 20, entered at the upper edge of the container. Another pipe line (22a) left the container half way up and returned to the building, Item 20, after passing through a centrifugal pump. The container was used for clarifying a liquid.
23. Forge, a low brick building covered with wood and roofing felt, 15 x 8 meters. The equipment consisted of about 15 different metal-working machines and several hearths.
24. Old two-story brick building covered with wood and roofing felt, 12 x 8 meters. This building was used as quarters for about 40 MVD guards.
25. Dog kennels. About 20 Alsations were held in these kennels as watch-dogs.
26. Forge, a brick structure, 10 x 5 meters. The forge was the repair shop for the installations Items 20, 21, 27, and 28. Mainly boilers were repaired. The respective hearths were in the open outside the building.
27. Old brick building, 20 x 12 x 15 meters. Its roof consisted of steel girders covered with wood and roofing felt. Six closed stirring machines, each 2 meters high and 1.7 meters in diameter, were set up at different heights above the ground. The machines were heated by steam pipe coils which, like the stirring machines, were made of nickel-chrome steel. One of the stirring machines was set up almost under the roof. A blue liquid was seen here running through an inspection glass. Twelve open sheet-metal containers were set up on the floor of the building. They were closed with metal lids during operation. Materials processed included a product consisting of white crystals, which arrived in paper bags. A blue dye was produced which was packed, in crystal shape, in wooden containers and sent to the building indicated as Item 28, where it was dried. It was subsequently processed in the warehouse, Item 29, and packed there for dispatch.
28. Drying building, 12 x 6 x 10 meters. The dyestuff produced in the installation, Item 27, was predried in this building.

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29. Storehouse, 8 x 8 x 8 meters. A hall structure with light wooden roof. The dyestuff was redried by an electrically heated drying apparatus of German make, and then packed. The product was trucked in shipments of 20 barrels each to the Rubezhnaya Combine.
30. Brick building, 10 x 20 meters. The guard for the gate-check was housed in one room. Next to this room were several compartments used as shower and wash rooms for the workers.
31. Northern and southern annexes of the building indicated as Item 32. A telephone switchboard was in the northern annex, and an emergency power installation operated by a 4,000-hp Diesel engine (sic) [redacted] was in the southern annex.
32. Brick building, 15 x 12 x 10 meters. In August 1949, it was neither completed nor equipped.
33. Heating installation for the entire plant. There were eight coke-fired boilers, each 2 meters in diameter and 12 meters long. The coke was charged by hand stoking. In the summer of 1949, four boilers were in operation and those remaining, including two dismantled German boilers, were being installed. The boilers had an operating pressure of 6 atmospheres.
34. Brick smokestack of the heating installation, 30 meters high.
35. Machine shop. Its equipment included 6 lathes of different sizes, 1 head lathe, 1 gear milling machine, 2 horizontal milling machines, type Werner, 1 vertical milling machine, and various other metalworking machinery. Four blowers for the steam boiler of Item 33 were set up in an adjoining room.
36. Carpenter's shop with wood drying room. Doors and windows were made. This building section was 16 meters high.
37. Transformer station, 25 x 6 meters, a three-story structure, rebuilt in 1947. Five transformers were on the ground floor. Another large transformer was in the open air close to the building. Incoming power lines were supported by wooden masts; the outgoing power supply to the different production departments was conducted through underground cables which came from dismantled German material. On the second floor some compartments were completed but they were still empty in the summer of 1949.
38. Brick building, 20 x 10 x 10 meters. Two vertical columns, 8 meters high and 1.8 meters in diameter, were set up inside the building. Beside the columns was a stirring machine, 4 meters high and 3 meters in diameter. Two systems of pipe coils made of "thermosilit" were placed on frames. "Thermosilit" is a material rich in silicic acid and burnt at high temperatures. The pipes had an interior diameter of 3 inches.
39. At the southeastern, the narrow, side of the building indicated as Item 38, there were two columns made of V2A steel, each 8 meters high and 2 meters in diameter. They were filled with Raschig rings. Pipe lines led from this installation to the set of apparatus in a section of Item 38.
40. Annex of the building indicated as Item 38. Eight vertical containers, each 6 meters high and 2.2 meters in diameter, as well as many pipe lines, were in this structure.

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41. Two-story annex of the building indicated as Item 33, 15 x 6 meters. Several pumps were installed in one room of this annex. Offices and bathing installations were in other rooms.
42. Old workshop building, 30 x 25 x 5 meters, with a roof consisting of wood and roofing felt. There were three furnaces walled with fire clay. On each furnace was a sheet-metal hood ending in a sheet metal smokestack 50 cm in diameter. The smokestacks extended 4 meters above the roof. The installation was to be put into operation in late 1949. Eight lead-lined pumps and one acidproof stoneware pump stood in a small annex.
43. Sawmill, equipped with a vertical saw frame operated by a 22-hp engine.
44. Carpenter's shop, an old brick building 10 x 10 meters. Equipment included dismantled German milling machines, band and circular saws, and planing machines.
45. Old flat building, 30 x 15 meters. It was divided into several storage rooms.
46. Annex of a destroyed workshop building (46a), 12 x 10 meters. It housed a laboratory with very good equipment which came from dismantled German laboratories. The products of the different departments were tested here. Eight employees worked in the laboratory. No German chemists had been employed in the plant by August 1949.
47. A residential building for workers, 25 x 8 meters, which was vacant prior to the summer of 1949.
48. Building, 25 x 8 meters, vacant prior to the summer of 1949. Formerly it was equipped as a kitchen and mess hall. Equipment from dismantled German laboratories was temporarily stored in this structure.
49. Two open-air containers, 8 meters high and 6 meters in diameter, surrounded by a high earth embankment. They were constantly guarded by an armed MVD guard.
50. Two old brick buildings with wooden roofs, 10 x 5 meters. The structures were surrounded by high earth embankments. In 1944, yellow-brown gunpowder in small rolls was still stored in these sheds. In 1947, picric acid was packed here in paper sacks and trucked away. Twelve workers, mostly women, were employed in this installation. The trucks carried a flag with a skull and crossbones as a danger symbol and were escorted by two MVD soldiers.
51. Transformer house outside the plant fence.
52. Main entrance to the plant.
53. Plant streets.
54. Highway to Rubezhnaya.
55. Spur tracks.
56. Plant fence.

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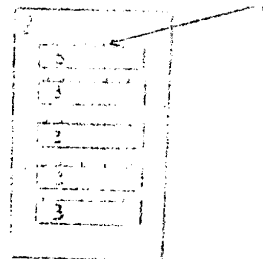
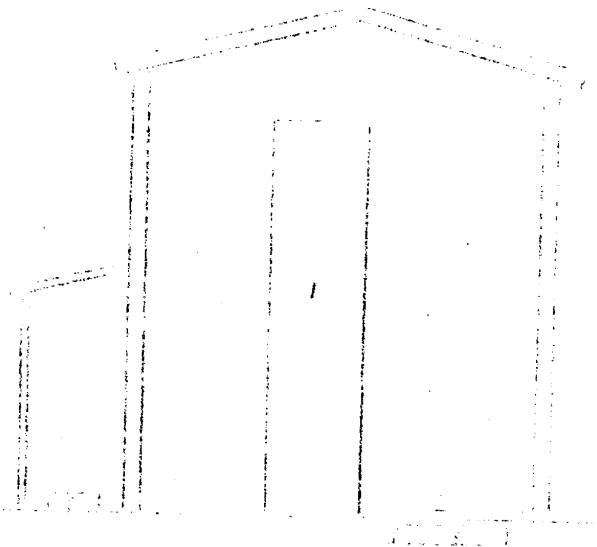
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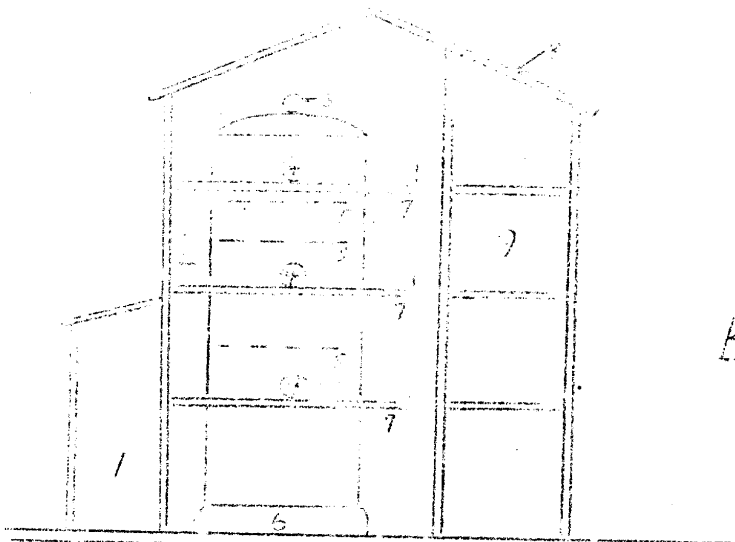
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Cross Sections of the Building Indicated as Item 7 on the Layout Sketch

Legend: See next page



A



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Legend:

A. Cross section of the southeastern part of the building

1. Furnace-like structure made of clinker stones, with built-in blasts, 3 meters wide, 2 meters deep and 3 meters high.
2. Tiled basin, 3 x 15 meters, and 1.2 meter deep.
3. Five pedestals, each about 60 cm high.
4. Angle irons, sunk into the ground and holding the pedestals of Item 3.
5. Concrete foundation, 4 x 4 meters.

B. Cross section of the northwestern part of the building

1. Vacant annex, which was provided for the installation of electric motors.
2. Two columns, one behind the other, with walls consisting of 30 mm gauge steel plates, each 20 meters high and 3.2 meters in diameter. They were walled on the inside with acidproof stones.
3. Pipe connecting both columns.
4. Three manholes with screw caps.
5. Several built-in perforated bottoms made of acidproof stoneware.
6. Concrete foundation.
7. Iron catwalks.
8. Thick concrete roof.
9. Office and laboratory rooms in three stories.

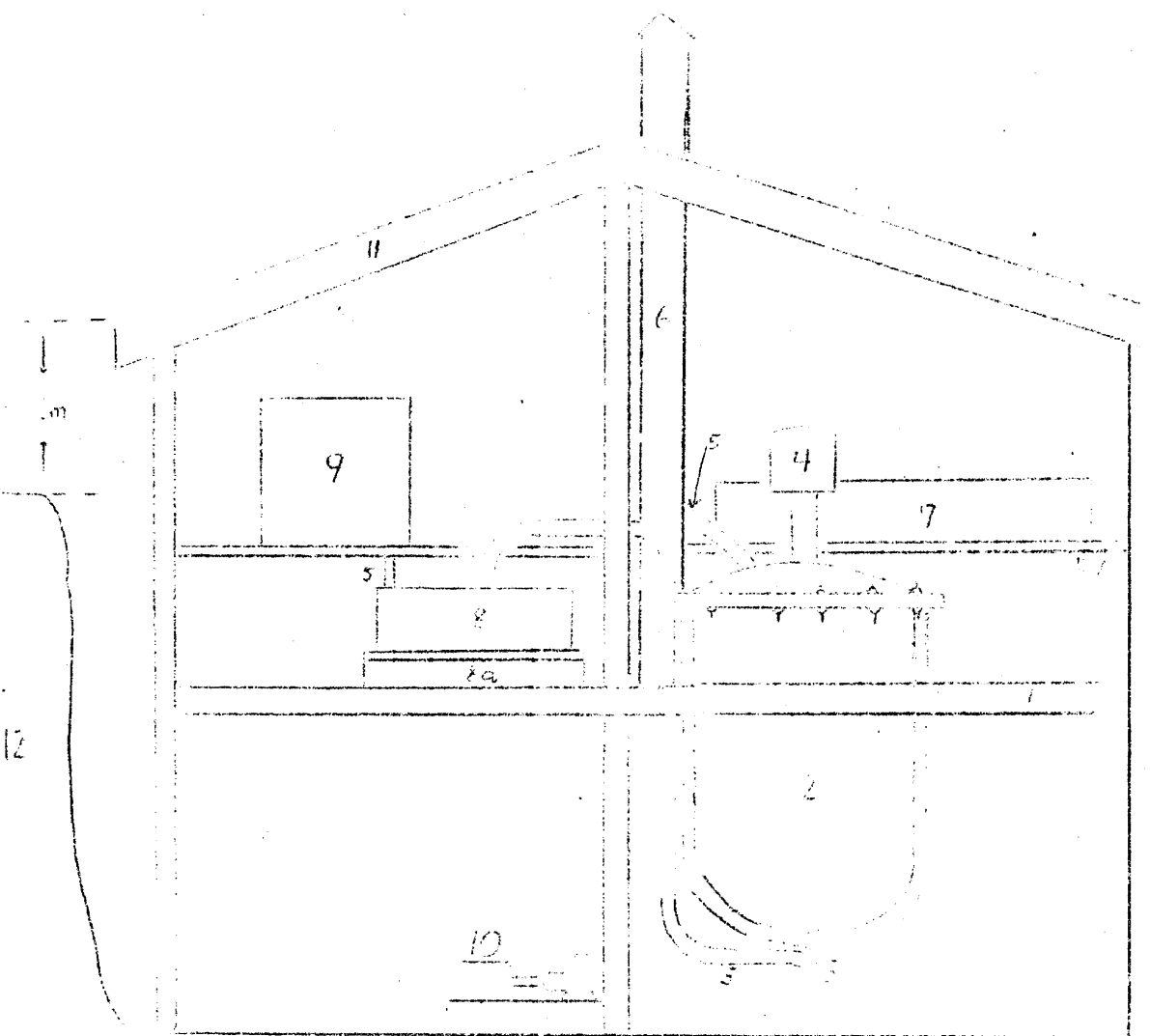
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Cross Section of the Building Indicated as Item 20 on the Layout Sketch.

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Legend:

1. Sheet metal catwalks on T girders.
2. Six stirring machines, one behind the other, made of nickel-chrome steel, with screw caps, about 4 meters high and 2 meters in diameter.
3. Outlet with sealing valve.
4. Driving motor.
5. Pipes made of nickel-chrome steel.
6. Smokestack for the escape of nitriding gases.
7. Open basin made of nickel-chrome steel, 6 x 6 x 0.6 meters.
8. Open basin made of nickel-chrome steel, 3 x 3 x 0.8 meters. The basin rested on a concrete base (8a) covered with sheet lead.
9. Round open container, about 2 meters high, in connection with the building indicated as Item 8 of the layout sketch, Annex 1 (sic).
10. Centrifugal pump with a pipe socket 20 cm in diameter.
11. Thick concrete roof.
12. High earth embankment surrounding the building on three sides.

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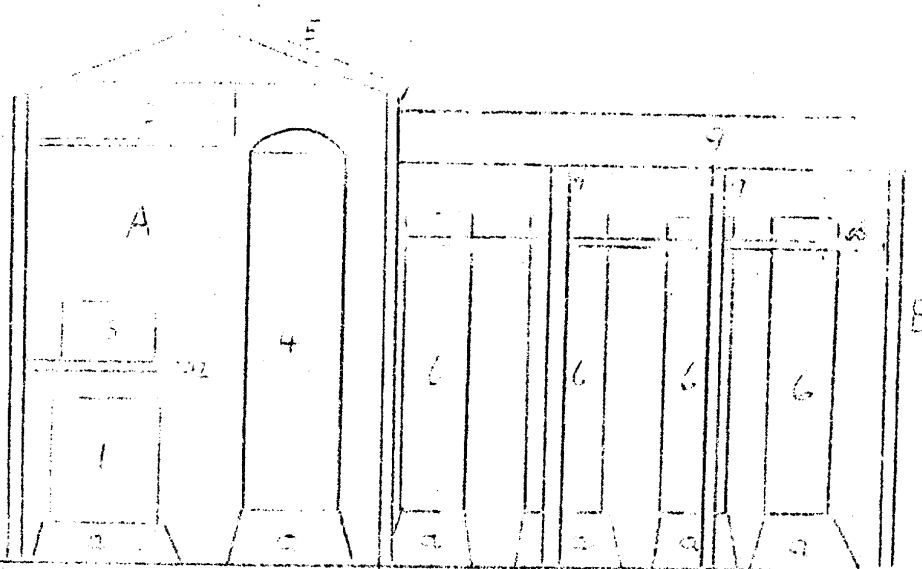
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Cross Section of the Building Indicated as Item 38 on the Layout Sketch, Including Adjacent Buildings, Items 40 and 41

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Legend:

A. Building indicated as Item 38 on the layout sketch

1. Stirring machine made of nickel-chrome steel, 4 meters high and 3 meters in diameter.
 - a. Concrete foundation.
2. Catwalks on T girders covered with sheet metal.
3. Two sets of pipe coil systems made of "thermosilit" with an interior pipe diameter of 3" .
4. Two columns, one behind the other, with steel jacket, lined with lead, each 8 meters high and 1.8 meters in diameter.
 - a. Concrete foundation.
5. Concrete roof.

B. Building indicated as Item 40 on the layout sketch

6. Eight columns, each 6 meters high and 2.20 meters in diameter, with steel jackets, lined with lead, set up in two rows.
 - a. Concrete foundations.
7. Steel girder frame.
8. Catwalks on T girders covered with sheet metal.
9. Thick concrete roof.

C. Building indicated as Item 41 on the layout sketch

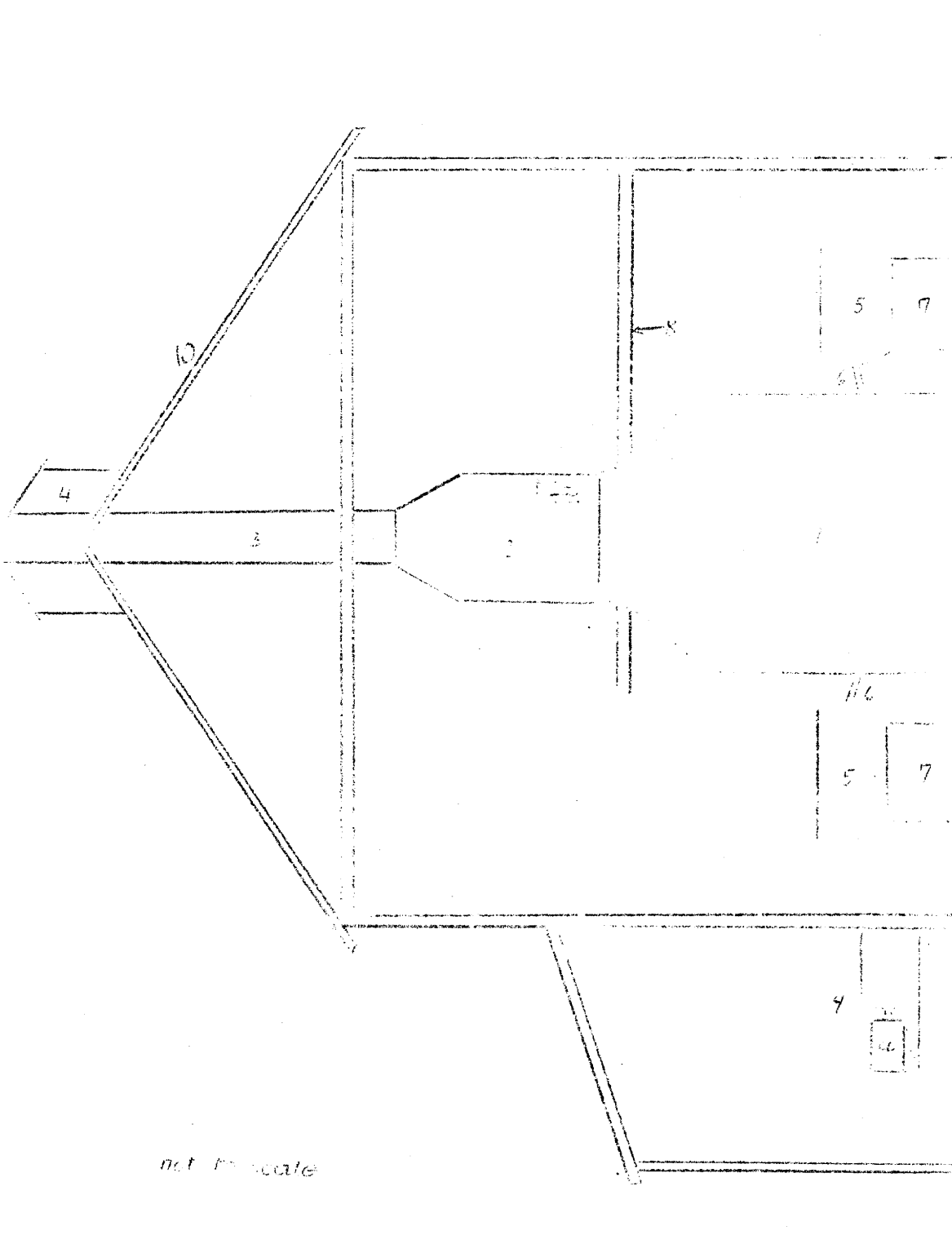
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Gross Section of the Building Indicated as Item 42 on the Layout Sketch



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Legends:

1. Three furnaces walled with fireclay stones, set up in a line.
2. Sheet metal hood with door (a) for charging the furnace.
3. Sheet-metal smokestack, 50 cm in diameter, extending 4 meters above the roof.
4. Roof mount with side ventilation flaps.
5. Two basins hewn in natural stone.
6. Grooves leading from the basin to the furnace.
7. Concrete foundations.
8. Catwalk, an iron structure.
9. Nine pumps, set in a line. One pump was made of "bermosilit".
 - a. Nine motors, one for each pump.
10. Light roof made of wood and roofing felt.

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Legend to the enclosure:

1. Kremenaya railroad station.
2. Volodino railroad station.
3. Rubezhnaya northern railroad station.
4. Rubezhnaya main railroad station.
5. Severo Donetsk railroad station.
6. Proletarsk railroad station.
7. Lisichansk railroad station.
8. Pereyezdnyaya railroad station.
9. Volcheyarskaya railroad station, at the southern edge of Verkhneye.
10. Arinovka railroad station.
11. Three wooden bridges for vehicles across the Severnyy Donets River.
12. Double-track railroad bridge across the Severnyy Donets River.
13. Two single-track railroad bridges across a swampy lake and the Berovaya River.
14. Long-distance power line coming from the Verkhneye power plant.
15. Long-distance gas line from the Podzangaz underground coal gas plant to the power plant and the soda factory in Verkhneye.
16. Suspension railway from the limestone quarries near Semenevka to the soda factory in Verkhneye.
17. Several swampy lakes and ponds.
18. Rubezhnaya Chemical Combine.
19. Limestone factory.
20. Underground explosives depot.
21. Zavod 20 Explosives Plant.
22. Water tower.
23. Silikatnyy Zavod Limestone factory.
24. Severo Donetsk nitrogen plant.
25. Donsoda soda factory and Verkhneye power plant.
26. Semenevka limestone quarries.
27. Podzangaz underground coal gas plant.

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28. Proletarsk glass factory, located on both sides of a street.
29. Explosives depot for the coal mines.
30. Coal shafts with workers' settlements.
31. Coal shafts.
32. Krasnyy Khimik agricultural enterprise.
33. Lesnaya Dacha forester's house.
34. Highways.

(The following is a list of place names given on the enclosure with the correct names of the places mentioned:

Kremennoye - Kremennaya	Podovka - Purovka
Byelavka - Kudryashovka	Metslykino - Menshkin
Sekmenyevka - Semanovka	Severo Donetsk - Severo-Donetskaya

Other spellings given on the enclosure are correct.)

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